

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An image forming apparatus, comprising:
means for determining a direction of a document data whether the document data direction is a vertical long or horizontally long;
means for determining a direction of a sheet contained in a sheet cassette whether the sheet direction is a vertical long or horizontally long;
a page memory to store image data for every page;
image rotating means for rotating the image data stored in the page memory at a specified angle when the document data direction disagrees with the sheet direction;
image correction means for correcting pixels of which positional relationship was changed from that before rotation as a result of the rotation of the image data by the image rotating means to come near to the positional relationship before the rotation; and
image forming means for forming images on the sheet based on the image data of which the positional relationship of pixels was corrected by the image correction means.
2. (Currently Amended) An image forming apparatus, comprising:
means for determining a direction of a document data whether the document data direction is a vertical long or horizontally long;
means for determining a direction of a sheet contained in a sheet cassette whether the sheet direction is a vertical long or horizontally long;
a page memory to store image data for every page;
image rotating means for rotating the image data stored in the page memory at a specified angle when the document data direction disagrees with the sheet direction;
corrected pattern holding means for regarding pixels requiring correction as replacing subject pixels when the image rotating means rotates the image data and holding the image data after correcting a matrix pixel array pattern including the replacing subject pixels as noteworthy pixels;

image data searching means for searching image data in accord with the matrix pixel array pattern held by the corrected pattern holding means out of rotary processed image data by the image rotating means;

image correcting means for correcting the replacing subject pixels with the pixel array pattern when the image data searching means detect the image data in accord with the pixel array pattern; and

image forming means for forming an image on the sheet based on the image data corrected by the image correcting means.

3. (Original) The image forming apparatus according to claim 2, wherein the noteworthy pixels are located at the central portion of the matrix pixel array pattern.

4. (Original) The image forming apparatus according to claim 2, wherein the corrected pattern holding means makes pixels of which positional relationship differs from that before the rotating when halftone processed image data is rotated as pixels subject to replacement and holds corrected pixel data of which positional relationship was corrected for the matrix pixel array pattern including the replacing subject pixels as noteworthy pixels.

5. (Currently Amended) An image forming apparatus, comprising:
means for determining a direction of a document data whether the document data direction is a vertical long or horizontally long;

means for determining a direction of a sheet contained in a sheet cassette whether the sheet direction is a vertical long or horizontally long;

a page memory to store image data for every page;

image rotating means for rotating the image data stored in the page memory at a specified angle when the document data direction disagrees with the sheet direction;

first pattern holding means for regarding pixels required for correction as rotation-subject pixels when the image rotation means rotates the image data and for holding first image pixel data that are corrected with respect to a matrix pixel array pattern including the rotation subject pixels as noteworthy pixels;

second pattern holding means for regarding pixels required for correction as non-rotation subject pixels when the image rotation means does not rotate the image data and for holding second image pixel data that are corrected with respect to a matrix pixel array pattern including the non-rotation subject pixels as noteworthy pixels;

image correction means for replacing the first image pixel data with noteworthy pixels of the image data that are in consistent with the first image pixel data when the image rotation means rotates the image data stored in the page memory and for replacing the second image pixel data with noteworthy pixels of the image data that are in consistent with the second image pixel data when the image rotation means does not rotate the image data stored in the page memory; and

image forming means for forming an image on the sheet based on the image data corrected by the image correction means.

6. (Currently Amended) An image forming method, comprising:

determining a direction of a document data whether the document data direction is a vertical long or horizontally long;

determining a direction of a sheet contained in a cassette whether the sheet direction is a vertical long or horizontally long;

storing image data for every page;

rotating the stored image data at a specified angle when the document data direction disagrees with the sheet direction;

correcting pixels in the rotated image data of which positional relationship before and after the rotation has changed to come near the positional relationship before the rotation; and

forming an image on the sheet based on the corrected image data.

7. (Currently Amended) An image forming method, comprising:

regarding pixels requiring correction as replacing subject pixels when image data is rotated at a specified angle and holding the image data after correcting a matrix pixel array pattern including the replacing subject pixels as noteworthy pixels;

determining a direction of a document data whether the document data direction is a vertical long or horizontally long;

determining a direction of a sheet contained in a sheet cassette whether the sheet direction is a vertical long or horizontally long;

storing image data for every page;

rotating the stored image data at a specified angle when the document data direction disagrees with the sheet direction;

searching image data in accord with the matrix pixel array pattern held out of rotary processed image data;

correcting by replacing subject pixels with the pixel array pattern when the image data in accord with the pixel array pattern is detected; and

forming an image on the sheet based on the corrected image data.

8. (Original) An image forming apparatus according to claim 6, wherein the correction step decides pixels of which positional relationship differ from that before the rotation when halftone processed image data was rotated as pixels subject to replacement and holds the pixel data of which positional relationship was correct for the matrix pixel array pattern including the subject pixels as noteworthy pixels.

9. (Currently Amended) An image forming method, comprising:

a first holding step to regard pixels required for correction as rotation subject pixels when the image is rotated at a specified angle and for ~~hold~~ holding first image pixel data that are corrected with respect to a matrix pixel array pattern including the rotation subject pixels as noteworthy pixels;

a second holding step to regard pixels required for correction as non-rotation subject pixels when the image data is not rotated and hold second image pixel data that are corrected with respect to a matrix pixel array pattern including the non-rotation subject pixels as noteworthy pixels;

a determining step to determine a direction of a document data whether the document data direction is a vertical long or horizontally long;

a determining step to determine a direction of a sheet contained in a sheet cassette whether the sheet direction is a vertical long or horizontally long;

a storing step to store image data for every page;

a rotation step to rotate the stored image data at a specified angle when the document data direction disagrees with the sheet direction;

a correction step to replace pixels at the center of image data conforming to the matrix pixel array pattern held in the first holding step when image data stored in the storing step is rotated and replaced in the rotation step and when not replaced by rotating, replace pixels at the center of image data conforming to the matrix pixel array pattern held in the second holding step to the corrected matrix pixel data of the pixel array pattern[[, and]];

a correction step to replace the first image pixel data with noteworthy pixels of the image data that are in consistent with the first image pixel data when the image rotation step rotates the image data stored in the storing step and to replace the second image pixel data with noteworthy pixels of the image data that are in consistent with the second image pixel data when the image is not rotated; and

a step to form an image on the sheet based on the image data corrected in the correction step.

10. (Currently Amended) An image forming apparatus, comprising:

means for determining a direction of a document data whether the document data direction is a vertical long or horizontally long;

means for determining a direction of a sheet contained in a sheet cassette whether the sheet direction is a vertical long or horizontally long;

a page memory configured to store image data for every page;

an image processor connected to the page memory, wherein the page memory rotates the image data stored in the page memory at a specified angle when the document data direction agrees with the sheet direction and corrects pixels of which positional relationship was changed from that before rotation as a result of the rotation of the image data to come near to the positional relationship before the rotation; and

a print engine configured to form images based on the image data of which positional relationship of pixels was corrected by the image processor.

11. (Currently Amended) An image forming apparatus, comprising:

means for determining a direction of a document data whether the document data direction is a vertical long or horizontally long;

means for determining a direction of a sheet contained in a sheet cassette whether the sheet direction is a vertical long or horizontally long;

a page memory configured to store image data for every page;

an image processor connected to the page memory, wherein the image processor rotates the image data stored in the page memory at a specified angle when the document data direction agrees with the sheet direction;

a pattern replacing table configured to make pixels requiring correction when rotating the image data by the image processor and hold corrected pixel data for a matrix pixel array pattern having a pixel located at a center thereof with the pixel subject to replacement;

wherein the image processor searches the image data in accord with the matrix pixel image array pattern held by the pattern replacing table out of rotary processed image data and replaces a pixel subject to replacement that is the central pixel of the image data when image data in accord with the matrix pixel image array pattern is searched; and

a print engine configured to form images based on the image data of which positional relationship of pixels was corrected by the image processor.

12. (New) The image forming apparatus according to claim 1, wherein the image correction means includes corrected pattern holding means for regarding pixels requiring correction as replacing subject pixels when the image rotating means rotates the image data and holding the image data after correcting a matrix pixel array pattern including the replacing subject pixels as noteworthy pixels.

13. (New) The image forming apparatus according to claim 12, wherein the corrected pattern holding means is detachable to the image forming apparatus to replace the image data after correcting.

14. (New) The image forming apparatus according to claim 2, wherein the noteworthy pixels comprises two or more adjacent pixels.

15. (New) The image forming apparatus according to claim 14, wherein the image rotating means rotates the noteworthy pixels comprising two or more adjacent pixels as one block.

16. (New) The image forming apparatus according to claim 14, wherein the image data searching means includes:

means for selecting sequentially the noteworthy pixels;

means for acquiring a predetermined sized matrix image data from the image data whenever noteworthy pixels being selected by the selecting means; and

means for comparing between the predetermined sized matrix image data and the matrix pixel array pattern held by the corrected pattern holding means to search the presence of patterns of which white and black pixel array agree with the predetermined sized image data.

17. (New) The image forming apparatus according to claim 16, wherein the image correcting means does not correct the replacing subject pixels with the pixel array pattern when the image data searching means detect the image data in disaccord with the pixel array pattern.

18. (New) The image forming apparatus according to claim 16, wherein the selecting means, the acquiring means and the comparing means operate repeatedly whenever noteworthy pixels are selected.

19. (New) The image forming apparatus according to claim 1, wherein the image rotating means rotates the image data in a rightward or leftward 90°.

20. (New) The image forming apparatus according to claim 2, wherein the specified angle is a rightward or leftward 90°.